Renewable Energy in Vietnam – Potentials for Sustainable Urban Development

ROAP HPM/CTA WORKSHOP
Integrating Field Experiences into Global Toolkits and Normative Products

Fukuoka, 28 Sept – 1 Oct 2010

Presentation on Expert Group Meeting
Pham Thi Thu HUONG/CTA Vietnam
Overview

- Total population (2008): 86 millions
  - Urban: 24 millions (27.9%)
- According to orientations in the National Urban Development MP: urban size will increase 45% of the total population and 1.4% of the total area by 2020.
- Rapid urbanization/modernization process has promoted the increase of energy demand, special in mega-cities
- Commercial energy was increased by 12.4% while GDP was increased by 7.2%, annually during 1996-2006.
Energy use trends in Vietnam

- Energy use in the economy of Vietnam has changed from a traditional types to a model different types with four major uses of energy:
  - Industrial use for fuel
  - Industrial use of electricity
  - Use of petroleum for transport
  - Domestic use of electricity

- REMP Forecast Energy Demand by Sector by 2025:
  - Final commercial energy consumption per capita: 700-850kgOE
  - Energy consumption structure: industry (37.7%), domestic (30.2%), transport (23.2%), services (8%), agriculture (0.9%)
Energy and Sustainable Development: Deep linkages

- **Environment**
  - *(Energy use is a major source of Environmental Stress)*

- **Economic**
  - *(Energy is a key motor of Macroeconomic Growth)*

- **Society**
  - *(Energy is a principle prerequisite for basic human needs)*
Issues - Perspective

The relationship between energy extraction, processing and use with environmental quality

- Energy extraction,
- Energy processing
- Energy use
- Atmospheric pollution
- GHG emissions
- Principle source of trace heavy metals

Natural habitats are disturbed
Challenges faced

- Shortages of natural resources
- Global economic crisis
- Climate change phenomena

Solutions

- Improvement of energy efficiency and energy savings
- Development of renewable energy source
Renewable Energy Technologies with Development in Vietnam—High Potentials
Solar water heater for households and business

Solar energy, most exploitable renewable source in Vietnam, because riches of sunshine: 1,800 – 2,600 hrs per year in average
Solar wind hybrid system for public lighting

Biogas in household’s breeding-farm
Landfill gas recovery plant for power generation in large scale

Wasted sludge

Solid waste
Vietnam is one of 14 most potential wind energy countries in the world. There are 10 local and international investors have registered for 12 projects on the windmill in Binh Thuan province, central region of Vietnam with total capacity more than 2,000 MW.
Thank you